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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/082,094 | 02/26/2002 | Shinichi Ogimoto | 219970US3 | 2673 |
| 22850 | 7590 | 06/13/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. | | | NGUYEN, DONGHAI D | |
| 1940 DUKE STREET | | | ART UNIT | |
| ALEXANDRIA, VA 22314 | | | PAPER NUMBER | |
| | | | 3729 | |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

②

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/082,094 | Applicant(s) OGIMOTO, SHINICHI | |
| | Examiner Donghai D. Nguyen | Art Unit 3729 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-7,15,16 and 19 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-7,15 and 19 is/are rejected.
 7) ☒ Claim(s) 16 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 22 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on March 22, 2005 has been considered and made of record.

Drawings

2. The amended drawings filed on March 22, 2005. These drawings are accepted by the Examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 15, and 19 are rejected under 35 U.S.C. 102(a) as being anticipated by AAPA.

Regarding claim 1, AAPA discloses an electronic component holding head (81) for holding an electronic component (9) to be mounted to a substrate (2), comprising: a main electronic component holding unit (81, 82, 82a, etc.); a vacuum chucking part (81a-c) provided on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking to said main electronic component holding unit (transport arm 83 Fig. 4); and a light path part (87) provided in the main component holding unit (83), the light path part configured to guide light shined onto a positioning mark (91b) formed in a terminal part (91a) of the electronic

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component (9) to correcting a position offset between the electronic component and a substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part (81) holds the electronic component at a position which is on straight lines substantially parallel to an edge of the electronic component (Fig. 5) and substantially mutually orthogonal on or over the positioning mark of the electronic component, and which is in the vicinity of the position mark and avoids the positioning mark (Fig. 4 note that the light ray, arrow, comes from light source 88 is parallel to the edge of the electrical component).

Regarding claims 15 and 19, AAPA discloses an electronic component mounting apparatus and method for mounting an electronic component onto a substrate, comprising: an electronic component feeding unit, which feeds an electronic component (85); an electronic component holding head (81), which holds the electronic component to be mounted onto a substrate; an imaging unit (87), which forms an image of a positioning mark formed at a terminal part of the electronic component held by said electronic component holding head, for correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted; a position offset detection unit (86), which detects a position offset of the electronic component relative to the substrate, based on image data of the positioning mark obtained by said imaging unit; a position correction unit (83, 89) which, based on the position offset detected by said position offset detection unit, performs control so as to correct the X direction and the Y direction position offset of the electronic component relative to the substrate, so that the electronic component with the thus corrected position offset is mounted to the substrate, wherein said electronic component holding head includes: a main electronic component holding unit (transport arm 83, see Fig. 4); a vacuum chucking part (81a-c) provided

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on said main electronic component holding unit so as to face the surface of the electronic component to be held by vacuum chucking, so that the electronic component is held by vacuum chucking (Fig. 6) to said main electronic component holding unit and a light path part (87) provided in the main component holding unit (83), the light path part configured to guide light shined onto the positioning mark (91a) formed in a terminal part (91) of the electronic component to correcting a position offset between the electronic component and the substrate to which the electronic component is to be mounted (Fig. 5), wherein said vacuum chucking part holds the electronic component at a position which is on straight lines substantially parallel to an edge of the electronic component (see Fig. 5) and substantially mutually orthogonal over the positioning mark of the electronic component, and which is in a vicinity of the position mark and avoids the positioning mark (Fig. 4).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of US Patent 6,203,082 to Bendat et al.

This rejection is set forth in the previous Office Action mailed on 09/22/04.

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Allowable Subject Matter

7. Claims 3-7 and 16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed on March 22, 2005 have been fully considered but they are not persuasive.

Applicant argues that the prior art does not teach the vacuum chucking part holding an electronic component at the straight lines mutually orthogonal on or over a position mark (See "Remarks" page 10, second paragraph). The examiner disagrees since the applied prior art as shown in Figs. 5 and 7 show the vacuum chucking part (81) that holds an electronic component (9) being configured in a straight line parallel to an edge of the component (9) and are substantially being mutually orthogonal over (to the right) of the positioning mark (91b). Therefore, the limitation where "said vacuum ... over the positioning mark" is met by the applied prior art reference (i.e. see Figs. 5 and 7 of the AAPA).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
June 6, 2005


MINHTRINH
PRIMARY EXAMINER